

Application No.: 09/689,222
Arndt dated Sept. 26, 2005
Reply to Final Office Action of July 26, 2005

REPLY UNDER 37 C.F.R. § 1.116
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AMENDMENT

In the Claims:

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Please amend claims 4, 24-25, 74-76, 80 and 84, without prejudice.

1-3. (Canceled)

4. (Currently Amended) A method of allowing a user to interactively explore how changes in path selection between media aggregation managers affects projected link utilization in a network conveying changes in projected link utilization responsive to path selection, the method comprising:

displaying graphical representations of a first media aggregation manager and a second media aggregation manager, the first and second media aggregation managers capable of serving as reservation session aggregation points on behalf of a first user community and a second user community, respectively, the first user community and the second user community communicatively coupled by a plurality of physical paths through which media packets may be exchanged by way of one or more packet forwarding devices;

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displaying a first projected link utilization schedule in response to a first request to analyze the effect of conveying media packets between the first user community and the second user community over a first path of the plurality of physical paths, the first projected link utilization schedule illustrating predicted bandwidth usage for one or more routers associated with the first path; and

displaying a second projected link utilization schedule in response to a second request to analyze the effect of conveying media packets between the first user community and the second user community over a second path of the plurality of physical paths, the second projected link utilization schedule illustrating predicted bandwidth usage for one or more routers associated with the second path.

5. (Previously Presented) The method of claim 4, further comprising overlaying a selected path of the plurality of physical paths onto existing bandwidth allocations to determine a projected link utilization associated with the selected path.

6-23. (Canceled)

24. (Currently Amended) A machine-readable storage medium having stored thereon data representing sequences of instructions which, when executed by a processor, cause the processor to:

display graphical representations of a first media aggregation manager and a second media aggregation manager, the first and second media aggregation managers capable of serving as reservation session aggregation points on behalf of a first user community and a second user community, respectively, the first user community and the second user community communicatively coupled by a plurality of physical paths through

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which media packets may be exchanged by way of one or more packet forwarding devices;

display a first projected link utilization schedule in response to a first request to analyze the effect of conveying media packets between the first user community and the second user community over a first path of the plurality of physical paths, the first projected link utilization schedule illustrating predicted bandwidth usage for one or more routers associated with the first path; and

display a second projected link utilization schedule in response to a second request to analyze the effect of conveying media packets between the first user community and the second user community over a second path of the plurality of physical paths, the second projected link utilization schedule illustrating predicted bandwidth usage for one or more routers associated with the second path.

25. (Currently Amended) The machine-readable storage medium of claim 24, further comprising instructions to overlay a selected path of the plurality of physical paths onto existing bandwidth allocations to determine a projected link utilization associated with the selected path.
- 26-71. (Canceled)
72. (Previously Presented) The method of claim 4, wherein said displaying a first projected link utilization and displaying a second link utilization comprises displaying the first path and the second path prioritized based upon one or more predetermined factors.

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73. (Previously Presented) The method of claim 72, wherein the one or more predetermined factors include one or more of:

a number of nodes in the first path or the second path;

total available bandwidth for the first path or the second path;

available communications bandwidth on the first path or the second path;

propagation speed between nodes that make up the first path or the second path;

and

physical length of travel between nodes that make up the first path or the second path.

74. (Currently Amended) The machine-readable storage medium of claim 24, wherein said instructions further cause said processor to display said first link utilization schedule and said second link utilization schedule of the first path and the second path in a prioritized fashion based upon one or more predetermined factors.

75. (Currently Amended) The machine-readable storage medium of claim 74, wherein the one or more predetermined factors include one or more of:

a number of nodes in a path;

total available bandwidth for a path;

available communications bandwidth on a path;

propagation speed between nodes that make up a path; and

physical length of travel between nodes that make up a path.

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76. (Currently Amended) A method of allowing a user to interactively explore how changes in path selection between network devices affects projected link utilization in a network conveying changes in projected link utilization responsive to path selection, the method comprising:

displaying graphical representations of a first network device and a second network devices, the first and second network devices capable of serving as reservation session aggregation points on behalf of a first group of terminals and a second group of terminals, respectively, the first group of terminals and the second group of terminals communicatively coupled by a plurality of physical paths through which media packets may be exchanged by way of one or more packet forwarding devices;

displaying a first projected link utilization schedule in response to a first request to analyze the effect of conveying media packets between the first group of terminals and the second group of terminals over a first path of the plurality of physical paths, the first projected link utilization schedule illustrating predicted bandwidth usage for one or more routers associated with the first path; and

displaying a second projected link utilization schedule in response to a second request to analyze the effect of conveying media packets between the first group of terminals and the second group of terminals over a second path of the plurality of physical paths, the second projected link utilization schedule illustrating predicted bandwidth usage for one or more routers associated with the second path.

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77. (Previously Presented) The method of claim 76, further comprising overlaying a selected path of the plurality of physical paths onto existing bandwidth allocations to determine a projected link utilization associated with the selected path.
78. (Previously Presented) The method of claim 76, wherein said displaying a first projected link utilization and displaying a second link utilization comprises displaying the first path and the second path prioritized based upon one or more predetermined factors.
79. (Previously Presented) The method of claim 78, wherein the one or more predetermined factors include one or more of:
 - a number of nodes in the first path or the second path;
 - total available bandwidth for the first path or the second path;
 - available communications bandwidth on the first path or the second path;
 - propagation speed between nodes that make up the first path or the second path;and
 - physical length of travel between nodes that make up the first path or the second path.
80. (Currently Amended) A method of ~~allowing a user to interactively explore how changes in path selection between network devices affects projected link utilization in a network~~ conveying changes in projected link utilization responsive to path selection, the method comprising:
 - displaying graphical representations of a first network device and a second network device, the first and second network devices capable of serving as reservation session aggregation points on behalf of a first group of terminals associated with a first

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enterprise location and a second group of terminals associated with a second enterprise location, respectively, the first group of terminals and the second group of terminals communicatively coupled by a plurality of physical paths through which media packets may be exchanged by way of one or more packet forwarding devices;

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displaying a first projected link utilization schedule in response to a first request to analyze the effect of conveying media packets between the first group of terminals and the second group of terminals over a first path of the plurality of physical paths, the first projected link utilization schedule illustrating predicted bandwidth usage for one or more routers associated with the first path; and

displaying a second projected link utilization schedule in response to a second request to analyze the effect of conveying media packets between the first group of terminals and the second group of terminals over a second path of the plurality of physical paths, the second projected link utilization schedule illustrating predicted bandwidth usage for one or more routers associated with the second path.

81. (Previously Presented) The method of claim 80, further comprising overlaying a selected path of the plurality of physical paths onto existing bandwidth allocations to determine a projected link utilization associated with the selected path.
82. (Previously Presented) The method of claim 80, wherein said displaying a first projected link utilization and displaying a second link utilization comprises displaying the first path and the second path prioritized based upon one or more predetermined factors.
83. (Previously Presented) The method of claim 82, wherein the one or more predetermined factors include one or more of:
 - a number of nodes in the first path or the second path;
 - total available bandwidth for the first path or the second path;
 - available communications bandwidth on the first path or the second path;

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propagation speed between nodes that make up the first path or the second path;
and

physical length of travel between nodes that make up the first path or the second path.

84. (Currently Amended) A method of allowing a user to interactively explore how changes in path selection between network devices affects projected link utilization in a network conveying changes in projected link utilization responsive to path selection, the method comprising:

displaying graphical representations of a first network device at an edge of a first local area network on which a first set of terminals runs a first set of local applications on behalf of which the first network device is configured to act as a signaling and control proxy and a second network device at an edge of a second local area network on which a second set of terminals runs a second set of local applications on behalf of which the second network device is configured to act as a signaling and control proxy, the first and second network devices capable of serving as reservation session aggregation points on behalf of a first group of terminals and a second group of terminals, respectively, the first group of terminals and the second group of terminals communicatively coupled by a plurality of physical paths through which media packets may be exchanged by way of one or more packet forwarding devices;

displaying a first projected link utilization schedule in response to a first request to analyze the effect of conveying media packets between the first group of terminals and the second group of terminals over a first path of the plurality of physical paths, the first

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projected link utilization schedule illustrating predicted bandwidth usage for one or more routers associated with the first path; and

displaying a second projected link utilization schedule in response to a second request to analyze the effect of conveying media packets between the first group of terminals and the second group of terminals over a second path of the plurality of physical paths, the second projected link utilization schedule illustrating predicted bandwidth usage for one or more routers associated with the second path.

85. (Previously Presented) The method of claim 84, further comprising overlaying a selected path of the plurality of physical paths onto existing bandwidth allocations to determine a projected link utilization associated with the selected path.
86. (Previously Presented) The method of claim 84, wherein said displaying a first projected link utilization and displaying a second link utilization comprises displaying the first path and the second path prioritized based upon one or more predetermined factors.
87. (Previously Presented) The method of claim 86, wherein the one or more predetermined factors include one or more of:
 - a number of nodes in the first path or the second path;
 - total available bandwidth for the first path or the second path;
 - available communications bandwidth on the first path or the second path;
 - propagation speed between nodes that make up the first path or the second path;and
 - physical length of travel between nodes that make up the first path or the second path.